

(19)



Europäisches Patentamt
 Européen Patent Office
 Office européen des brevets



(11) Publication number:

0 409 278 A3

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **90113979.0**(51) Int. Cl.5: **H03K 3/023, H04B 1/10,
G11B 20/24**(22) Date of filing: **20.07.90**(30) Priority: **20.07.89 JP 187810/89**(43) Date of publication of application:
23.01.91 Bulletin 91/04(84) Designated Contracting States:
DE ES FR GB IT(88) Date of deferred publication of the search report:
31.03.93 Bulletin 93/13(71) Applicant: **SANYO ELECTRIC CO., LTD.**
18, Keihanondori 2-chome
Moriguchi-shi Osaka-fu(JP)(72) Inventor: **Miura, Katsunori**
13-18-410, Nakano-shinmachi
Shijonawate-shi, Osaka-fu(JP)(74) Representative: **Glawe, Delfs, Moll & Partner**
Patentanwälte
Postfach 26 01 62 Liebherrstrasse 20
W-8000 München 26 (DE)(54) **Monostable multivibrator.**

(57) A monostable multivibrator is formed in a monolithic integrated circuit along with a voltage controlled oscillator (VCO). The VCO and the monostable multivibrator respectively include capacitors. A center frequency of the VCO is controlled by a control signal from a low-pass filter which receives an output of a phase comparator. A current from a constant current source circuit is adjusted to be in proportion to a level of the control signal. The capacitor of the monostable multivibrator is charged by the current thus adjusted from the constant current source circuit in response to a trigger pulse. A period from a time when the charge is started to a time when a charged voltage of the capacitor reached a predetermined value becomes a metastable period of the monostable multivibrator.

EP 0 409 278 A3

Docket # M&N-IT-557Applic. # 10/649,602Applicant: Schrödinger

Lerner and Greenberg, P.A.

Post Office Box 2480

Hollywood, FL 33022-2480

Tel: (954) 925-1100 Fax: (954) 925-1101

European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 11 3979

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	GB-A-2 162 395 (BURR-BROWN CORP.) * page 2, line 30 - page 5, line 126; figures 1,2 *	1,2,5,6	H03K3/023 H04B1/10 G11B20/24
A	DD-A-266 457 (TU DRESDEN) * the whole document *	1-3,5,6	
A	PATENT ABSTRACTS OF JAPAN vol. 9, no. 219 (M-410)(1942) 6 September 1985 & JP-A-60 80 314 (ROOMU K.K.) 8 May 1985 * abstract *	1-3,5,6	
A	FR-A-2 544 904 (VICTOR COMPANY OF JAPAN) * page 4, line 15 - page 6, line 35; figures 1,3 *	1,5,6	
A	PATENT ABSTRACTS OF JAPAN vol. 7, no. 178 (E-191)6 August 1983 & JP-A-58 084 507 (TOKYO SHIBAURA DENKI K.K.) 20 May 1983 * abstract *	1,5,6	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			H03K
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 30 DECEMBER 1992	Examiner P.TAYLOR
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.92 (P0401)